Amendments to the Abstract:

Please replace the Abstract with the following amended Abstract:

A ~~One embodiment of the present invention relates to a~~ method for increasing the roll offset operating range for a spacecraft using an earth sensor operating in a single scan mode~~. In accordance with this embodiment, the method comprises~~ includes the steps of moving the spacecraft to a first roll position, which has a roll angle that will cause the earth sensor to have a desired standard chord~~. Next~~, switching the earth sensor ~~is switched~~ to single scan mode by deselecting one of the earth sensor scans, whereby [[. By]] switching the earth sensor to a single scan mode, the earth sensor standard chord is locked at or near the desired standard chord. After the desired standard chord is set, the spacecraft is moved to a second roll position, which is a desired roll offset operating position for the spacecraft~~. Finally~~, and the earth sensor roll output (~~generating~~ generated by using the single scan mode) is used to calculate the spacecraft roll at the roll offset operating position.